

BENNEKER et al
Serial No. 10/538,045
November 7, 2008

AMENDMENT TO THE TITLE:

Please amend the title as follows:

PROCESS FOR PRODUCING CYCLOHEXANONE OXIME BY MIXING AN ACIDIC
AQUEOUS SOLUTION COMPRISING HYDROXYLAMMONIUM AND PHOSPHATE
WITH NITRIC ACID

AMENDMENT TO THE SPECIFICATION:

Please amend the paragraph on page 12, lines 5-26 as follows:

The aqueous reaction medium leaving extraction zone C through line 12 is recycled to the hydroxylammonium reactor A, through lines 13, 14, 15, and 1. A part of the aqueous reaction medium leaving the extraction zone C through line 12 is tapped for absorbing and oxidizing nitrogen oxides. This part of the aqueous reaction medium is fed through line [[16]] 23 to absorption column D, in which nitrogen oxides are absorbed, which are produced in reactor E by ammonia combustion and fed through line 18 to absorption column D. In column D nitric acid is produced from absorbed nitrogen oxides by a further reaction with water from the aqueous reaction medium. The aqueous reaction medium enriched with nitric acid passes from column D to bleaching column F through line 18. In column F residual nitrogen oxides are oxidized into nitric acid. Accordingly, the nitric acid concentration is increased in the aqueous reaction medium leaving column F through line 19. Optionally an additional amount of nitric acid can be supplied through line 20 and mixed with the acidic aqueous solution comprising nitric acid passing through line 19. The thus obtained second acidic aqueous solution comprising nitric acid passing through line 21 is mixed with the aqueous reaction medium passing through line 14, the first acidic aqueous solution. Optionally an additional amount of nitric acid can be supplied through line 22 and mixed with the third acidic aqueous solution passing through line 15. Subsequently the thus obtained third or fourth acidic aqueous solution is fed to the hydroxylammonium reactor through line 1, completing the cycle. The aqueous reaction medium passing through line 13 may be enriched

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with hydroxylammonium by adding an aqueous solution comprising hydroxylammonium through line 16, which may be tapped from line 5.